



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1430
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,059	09/29/2003	Andrew L. Purvis	HOW347	1189

7590

09/07/2006

Eckert Seamans Cherin & Mellott, LLC
Alcoa Technical Center
100 Technical Center Drive
Alcoa Center, PA 15069-0001

EXAMINER

CHEN, BRET P

ART UNIT	PAPER NUMBER
----------	--------------

1762

DATE MAILED: 09/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/674,059

Applicant(s)

PURVIS ET AL.

Examiner

B. Chen

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

Claims 1-6 are pending in this application, which is an RCE of Serial Number 10/674059.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/3/06 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Basta et al. (5,658,614) in view of Near et al. (6,143,361). Basta discloses a method of improving the oxidation resistance of a platinum modified aluminide coating formed on a nickel base

Art Unit: 1762

superalloy substrate by providing a platinum layer on the substrate and aluminizing the substrate by chemical vapor deposition with said platinum layer on said substrate including heating the substrate in a coating retort to a temperature of at least about 1000.degree. C., introducing a coating gas comprising hydrogen and aluminum trichloride into the coating retort to contact the heated substrate, and forming an outwardly grown, single phase (Ni,Pt) Al platinum modified aluminide coating (col.2 line 43 – col.3 line 2). The temperature can be 1000 degrees C (col.3 line 6) and the flow rate is 200-400 scfm (col.9 lines 24-25), and the volume percentage is 9% (col.4 lines 25-29). However, the reference fails to teach the appropriate flow rate and volume percentage.

It is well known in the art that flow rates and volume percentages are often varied as noted by Basta. Hence, it would have been obvious to one having ordinary skill in the art to have determined the optimum value of a cause effective variable such as flow rates and volume percentage through routine experimentation in the absence of a showing of criticality.

In addition, Basta remains silent on the pressure of the chamber. Near discloses a CVD method of introducing and reacting a metal halide gas into a high temperature retort to form a coating on a substrate at a reduced pressure obtained by the use of a vacuum pump (col.1 lines 11-23). Near specifically teaches that CVD parameters such as temperature, pressure, and time are conventionally varied (col.4 lines 19-34). It would have been obvious to utilize the reduced pressure of Near in Basta's process with the expectation of obtaining optimum deposition conditions because Near teaches that pressure is often varied in a CVD process.

The limitations of claims 2-6 are noted above.

Response to Arguments

Applicant's arguments filed 7/3/06 have been fully considered but they are not persuasive.

Applicant first argues that Basta provides no motivation to vary coating parameters (p.4 6th paragraph).

The examiner disagrees. This issue has been addressed in previous office actions.

Applicant next argues that the claimed parameters have a criticality associated with them which is supported by Figures 1, 2, and 3. Specifically, the criticality of the coating growth rate constant is dependent on volume % aluminum trichloride, reactor pressure, and total gas flow (p.5 first paragraph).

The examiner disagrees. It is first noted that claim 1 recites an aluminum trichloride concentration of less than about 1.4% by volume, a flow rate of 100-400 scfh, and a reactor pressure of 100-450 Torr. A quick look at Figures 1-3 show the growth rate constant compared with volume % aluminum trichloride (Figure 1), reactor pressure (Figure 2), and total gas flow (Figure 3).

Figure 1 shows no volume % aluminum trichloride above 1.4%. The examiner questions how criticality of the claimed range is established when no volume % outside the claimed range is shown.

With respect to the reactor pressure, it is noted that Figure 2 shows a reactor pressure of 200-650 Torr compared with the growth rate constant. Applicant argues that the claimed range of 100-450 Torr establishes criticality. The examiner first questions how the criticality of 100-200 Torr of the claimed range can be established when that range is not even shown in Figure 2.

Art Unit: 1762

In addition, Figure 2 shows a higher growth rate constant at 550 Torr than at 300 Torr. Yet, the applicant argues that there is a criticality at the 100-450 Torr range.

With respect to the total gas flow, it is noted that Figure 3 shows a total gas flow from 150-450 scfh compared with the growth rate constant. Applicant argues that the claimed range of 100-450 scfh establishes criticality. The examiner first questions how the criticality of 100-150 scfh of the claimed range can be established when that range is not even shown in Figure 3. In addition, the examiner questions how criticality of the claimed range is established when no total gas flow outside the claimed range is shown.

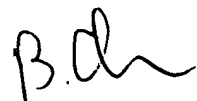
Applicant's arguments has been considered but are not deemed persuasive.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to B. Chen whose telephone number is (571) 272-1417. The examiner can normally be reached on 7:30am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Bc
9/2/06


BRET CHEN
PRIMARY EXAMINER